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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,801	07/31/2006	Marie-Claire Grosjean-Cournoyer	P/3610-72	5300
2352	7590	04/28/2010	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			PAK, JOHN D	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,801	Applicant(s) GROSJEAN-COURNOYER ET AL.	
	Examiner John Pak	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/06, 1/10</u> . | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-22 are pending in this application.

Applicant's election with traverse of the invention of Group I, wherein Compound I is the representative species of component (a) and tebuconazole is the representative species of component (b) in the reply filed on 1/22/2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Accordingly, claims 12-18 are withdrawn from further consideration as being directed to non-elected inventions. Claims 1-11 and 19-22 will presently be examined to the extent that they read on the elected subject matter of record.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) Independent claim 1 and several other dependent claims recite component (a) as a pyridylethylbenzamide derivative of "general formula (I)" (emphasis added). The term "general" renders the claim indefinite because it is not clear whether the formula given in claim 1 is merely one general possibility, i.e. the claims are open to other pyridylethylbenzamides that do not have the structure of formula (I).

(2) At line 14 of claim 1, "as to the N-oxides of 2-pyridine thereof" is unclear, grammatically incorrect, and lacks antecedent basis.

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(3) In claim 10, the term "triazole derivative" is indefinite. The term "derivative" can have multiple meanings, with almost no limit as to how far a compound can be derivatized from a starting triazole ring structure, e.g. ring opening/cleavage. One skilled in the art would not understand with sufficient clarity whether a given compound would or would not be within the metes and bounds of the claim term, "triazole derivative."

(4) Merely reciting another fungicide as "a fungicidal compound (c)" is confusing and indefinite since one skilled in the art cannot possibly know, without more, what would qualify a compound as a "(c)" compound.

(5) Improper Markush language is used in claim 20. Correct language is "selected from the group consisting of ... and [last member]."

(6) In claim 20, many of the (c) fungicides are triazoles, e.g. tebuconazole. So it is confusing to recite a component (b) again as a component (c).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of WO 2004/016088¹ and Holmwood et al. (US 4,723,984) in view of Hopkinson (US 6,746,988).

WO 2004/016088 discloses applicant's compounds of formula (I) as fungicides. See pages 1-3. 0.05 to 99 wt% concentration strength is disclosed (page 6, lines 27-28). The specific compound of applicant's compound in instant claim 9 is expressly disclosed (page 3, line 14). Combination with one or more of other active compounds such as fungicides (preferred) or insecticides is disclosed for broadening spectrum of activity (page 7, lines 10-13). Combination with agriculturally acceptable support, carrier, filler or surfactant is disclosed (page 5, last paragraph to page 6, third paragraph). Seed treatment is disclosed (page 6, line 29 to page 7, line 8). Curative or preventive control of phytopathogenic fungi of crops is disclosed by applying an effective and non-phytotoxic amount to the seed, plant or fruit of the plant or to the soil in which the plant is growing or in which it is desired to grow (page 7, lines 15-30). Specific activity against various phytopathogenic fungi in various specific plants and

¹ Prior art under 35 USC 102(e), international filing date of August 8, 2003.

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specific application amounts, 10-800 g/hectare and 2-200 g/100 kg seed, are further disclosed (pages 8-11).

Holmwood et al. disclose tebuconazole as a fungicide for protecting plants (claims 1, 3, 7, 9, 13, 15; column 38, lines 48-68). Concentration strength of 0.1 to 95 wt% is disclosed (column 40, lines 1-3). 0.01-50 kg/hectare of soil surface and 0.001-50 g/kg seed application rates are disclosed (column 40, lines 22-26). Protective action and systemic action are disclosed, as are applications to plant parts, the soil, root and seeds (column 39, first paragraph; column 40, lines 46-68). Combination with other known active compounds such as fungicides is disclosed (column 40, lines 4-8). Use with various carriers, surfactants and other conventional additives is disclosed (column 39, lines 8-68).

The patent by Hopkinson et al. is cited to establish that applicant's compound (b) and (c) fungicides are well-known fungicides, which are known to be used in combination. See claim 16, which discloses for example tebuconazole, trifloxystrobin, thiabendazole, propineb, difenoconazole, diniconazole, epoxiconazole, fenbuconazole, hexaconazole, imbenconazole, ipconazole, and many other well-known fungicides, and mixtures thereof.

The difference between the claimed invention and the cited references is that the references do not expressly disclose the specific combination of compound I + a triazole-structured compound such as tebuconazole. However, both compounds have been taught by the prior art as agriculturally useful fungicides, and combination with other fungicides has been specifically suggested. Therefore, one having ordinary skill in

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the art would have been motivated to combine the fungicidal compound of formula I such as compound I with a well-known triazole-structured fungicide such as tebuconazole with the expectation of obtaining an advantageous fungicidal mixture, as claimed. In re Kerkhoven, 205 USPQ 1069, 1072 (CCPA 1980); In re Crockett, 126 USPQ 186 (CCPA); Ex parte The NutraSweet Co., 19 USPQ2d 1586, 1587 (Bd. Pat. App. & Int. 1991). Further addition of a third known fungicide would have been similarly suggested from the motivation to obtain additional activity and spectrum of control.

Regarding the claimed ratio of 0.01 to 20 (a to b), such ratio would have been obvious from the prior art concentration and application amounts, which when combined at their known amounts and rates would provide such ratio of components.

Applicant's specification data has been reviewed, but the data there is not commensurate in scope with that of the claims. Evidence of nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. In re Kulling, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Lindner, 173 USPQ 356, 358 (CCPA 1972).

Applicant discloses observed data and synergism calculations based on the Colby formula. However, this formula is a rudimentary simplification of expected antimicrobial activity. The formula assumes that antimicrobial activity is linear and the second ingredient only acts on the surviving population that was not controlled by the first ingredient, further assuming that the surviving population is totally unaffected, not even slightly weakened, by the first ingredient. The formula can be rewritten as follows:

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$E = x + y (1 - x/100)$. Note that the underlying assumption in Colby is that y acts only on the surviving population that was totally unaffected by the first ingredient, i.e. $(1 - x/100)$. But such assumptions are rarely validated by actual observations.

For example, Colby can't even reliably predict what would happen when a single compound is used, due to its faulty and too-simple assumptions. Suppose there is a blind test of two 15 g/ha doses of unidentified fungicides, A and B. A provides 25% efficacy, B provides 25% efficacy, but A + B provides about 60-65% efficacy. Using Colby, the blind experiment could lead the person of ordinary skill in the art to conclude that A + B is synergistic because $E = 25 + 25 - (25 \times 25 / 100) = 43.75$. However, when it's revealed that A and B are both the same, compound I (see applicant's data on specification page 13), the ordinary skilled artisan would immediately recognize that Colby underestimates the expected efficacy such that it would even lead to the anomalous conclusion that a fungicidal compound synergizes itself.

Therefore, applicant's specification data and conclusion of synergism based on the Colby formula cannot be found persuasive. In the data for compound I + tebuconazole on page 13, the Examiner would note that result for 15 g/ha compound I + 15 g/ha tebuconazole is clearly synergistic and unexpected, but result for 31 g/ha + 31 g/ha would have been expected because it is no more than additive of the efficacies of compound I and tebuconazole. To date, applicant has presented no claim that is limited to 15 g/ha compound I and 15 g/ha tebuconazole. Note also that the data is tied to the 15 g/ha feature, which means that this is a method invention step, which is relevant only to a method invention. A composition claim cannot properly recite a 15 g/ha feature

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because the g/ha feature is a method invention feature and not a composition invention feature, i.e. a claimed composition invention of A + B cannot be affected or further limited by how much one intends to apply to the field. The only exception would be in claiming the composition as a unit dosage, e.g. a composition comprising 15 g of compound I + 15 g of compound B.

For these reasons, applicant's data is found insufficient and not commensurate in scope with that of the claimed subject matter. Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Pak/

Primary Examiner, Art Unit 1616